

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of

MATHEUS et al

Atty. Ref.: 2789-38

Serial No. to be assigned

Group: unknown

Filed: May 31, 2001

Examiner: unknown

For: FREQUENCY TRACKING DEVICE FOR A RECEIVER OF A MULTI-CARRIER  
COMMUNICATION SYSTEM

\* \* \* \* \*

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

**PRELIMINARY AMENDMENT**

In order to place the above-identified application in better condition for  
examination, please amend the application as follows:

**IN THE CLAIMS**

Please substitute the following amended claims for corresponding claims 4 and 14  
previously presented. A copy of the amended claims showing current revisions is  
attached.

4. {AMENDED} Frequency tracking device (FTD) according to claim 1, wherein  
said corrector (CORR1; CORR2) includes a second correction unit (CORR2)  
arranged downstream of the receiver multi-carrier filter bank and adapted to rotate all  
data symbols output by the receiver multi-carrier filter bank with the same phase shift  
depending on the frequency deviation estimate ( $f_{\text{off,est}}$ ).

14. {AMENDED} Receiver (RC) of a multi-carrier communication system  
(MC-SYS), comprising reception means (RM) for receiving multi-carrier symbols

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transmitted from a transmitter (TR) via a transmission channel, a receiver multi-carrier filter bank for converting said multi-carrier symbols into complex data symbols, a data symbol sink for receiving said data symbols and a frequency tracking device (FTD) in accordance with claim 1.

Please add the following new claim 23 as follows:

--23. {NEW} Receiver (RC) of a multi-carrier communication system (MC-SYS), comprising reception means (RM) for receiving multi-carrier symbols transmitted from a transmitter (TR) via a transmission channel, a receiver multi-carrier filter bank for converting said multi-carrier symbols into complex data symbols, a data symbol sink for receiving said data symbols and a frequency tracking device (FTD) in accordance with claim 11.


### **REMARKS**

The above amendments are made to place the claims in a more traditional format.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version With Markings To Show Changes Made.**"

Respectfully submitted,  
**NIXON & VANDERHYE P.C.**

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS**

4. {AMENDED} Frequency tracking device (FTD) according to claim 1 [or 3],  
wherein  
said corrector (CORR1; CORR2) includes a second correction unit (CORR2)  
arranged downstream of the receiver multi-carrier filter bank [(8)] and adapted to rotate  
all data symbols output by the receiver multi-carrier filter bank [(8)] with the same phase  
shift depending on the frequency deviation estimate ( $f_{\text{off,est}}$ ).
14. {AMENDED} Receiver (RC) of a multi-carrier communication system (MC-  
SYS), comprising reception means (RM) for receiving multi-carrier symbols transmitted  
from a transmitter (TR) via a transmission channel [(6)], a receiver multi-carrier filter  
bank [(8)] for converting said multi-carrier symbols into complex data symbols, a data  
symbol sink [(11)] for receiving said data symbols and a frequency tracking device  
(FTD) in accordance with [one or more of claims 1-10 or one or more of claims 11-13]  
claim 1.